

Notice of Allowability

Application No.

10/733,104

Examiner

Kamran Afshar, 571-272-7796

Applicant(s)

HASHIMOTO, YUKIO

Art Unit

2681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/15/2005.
2. ☒ The allowed claim(s) is/are 1-8, 11-14, 17 and 18.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 08/27/2004
- ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
- ☐ Notice of Informal Patent Application (PTO-152)
- ☒ Interview Summary (PTO-413), Paper No./Mail Date _____
- ☒ Examiner's Amendment/Comment
- ☒ Examiner's Statement of Reasons for Allowance
- ☐ Other _____

Kamran Afshar, 571-272-7796
Patent Examiner
Art Unit: 2681

DETAILED ACTION

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Samuel H. Weiner on 11/15/2005.

The application has been amended as follows:

In The Claims:

7. (Amended) A radio base station control system that controls a radio base station device communicating with a mobile terminal over a radio link and comprises first control means performing signaling transfer control and second control means performing user data transfer control relating to said terminal, said first and second control means being provided physically separated from each other;

wherein:

said first control means includes inquiry means for sending an inquiry signal for inquiring about timing information of said second control means, said timing information being required for signaling transfer control and being managed by said second control means; and
said second control means includes sending means for sending said timing information to said first control means when said second control means receives said inquiry signal; said first and second control means each includes clock control means for synchronizing the time of a clock built in said first control means and the time of a clock built in said second control means by using said time information.

wherein said first control means includes correction means for compensating

said timing information sent from said second control means.

8. (Amended) A radio base station control system that controls a radio base station device communicating with a mobile terminal over a radio link and comprises first control means performing signaling transfer control and second control means performing user data transfer control relating to said terminal, said first and second control means being provided physically separated from each other;

wherein:

said second control means manages timing information required for signaling transfer control by said first control means and includes sending means for periodically sending said timing information to said first control means; said first and second control means each includes clock control means for synchronizing the time of a clock built in said first control means and the time of a clock built in said second control means by using said time information.

wherein said first control means includes correction means for compensating said timing information sent from said second control means.

9. (Cancelled).

10. (Cancelled).

13. (Amended) A radio base station control method in a radio base station control system that controls a radio base station device communicating with a mobile terminal over a radio link and comprises first control means performing signaling transfer control and second control means performing user data transfer control relating to said terminal, said first and second control means being provided physically separated from each other;

wherein:

inquiry means is provided in said first control means for sending an

Art Unit: 2681

inquiry signal for inquiring about timing information of said second control means, said timing information being required for signaling transfer control and being managed by said second control means; and

sending means is provided in said second control means for sending said timing information to said first control means when said second control means receives said inquiry signal;

wherein:

time information sending means for sending time information is provided:
clock control means is provided in each of said first and second control means for
synchronizing the time of a clock built in said first control means and the time
of a clock built in said second control means by using said time information,
wherein correction means is provided in said first control means for compensating
the timing information sent from said second control means.

14. (Amended) A radio base station control method in a radio base station control system that controls a radio base station device communicating with a mobile terminal over a radio link and comprises first control means performing signaling transfer control and second control means performing user data transfer control relating to said terminal, said first and second control means being provided physically separated from each other;

wherein:

said second control means manages timing information required for signaling transfer control by said first control means, and sending means is provided in said second control means for periodically sending the timing information to said first control means;

wherein:

time information sending means for sending time information is provided:
clock control means is provided in each of said first and second control means for

synchronizing the time of a clock built in said first control means and the time of a clock built in said second control means by using said time information, wherein correction means is provided in said first control means for compensating the timing information sent from said second control means.

15. (Cancelled).

16. (Cancelled).

Allowable Subject Matter

2. Claims 1-8, 11-14 & 17-18 are allowed.

The following is an examiner's statement of reasons for allowance: 1-8, 11-14 & 17-18.

With respect to claim 1, Seta (U.S. Patent 6,483,825 B2) is the closest prior art to the application invention, which discloses a time synchronization method in a CDMA system, comprises of a mobile terminal, base station and a base station controller (See e.g. Title, Abstract, Co. 3, Lines 13-17, Fig. 1).

Hubbard (U.S. Patent, 5,565,862), which discloses collection and management of pipeline-flow data and first and second controller (See e.g. Title, Abstract, Figs. 1-2).

However, the prior art of record fails to disclose singly or in combination or render obvious that first control means controlling the radio base station and performing signaling transfer control; and second control means provided physically separately from the first control means for performing user data transfer control relating to the terminal; wherein: the first control means includes inquiry means for sending an inquiry signal for inquiring about timing information of the second control means, the timing information being required for signaling transfer control and being managed by the second control means; and the second control means includes sending means for sending the timing information to the first control means when the second control means receives the inquiry signal.

With respect to claim 2, the prior art of record fails to disclose singly or in combination or render obvious that first control means controlling the radio base station and performing signaling transfer control; and second control means provided physically separately from the first control means for performing user data transfer control relating to the terminal; wherein: the second control means

Art Unit: 2681

manages timing information required for signaling transfer control by the first control means and includes sending means for periodically sending the timing information to the first control means.

With respect to claim 5, the prior art of record fails to disclose singly or in combination or render obvious that the first and second control means each includes clock control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information; the first control means includes inquiry means for sending an inquiry signal for inquiring about timing information of the second control means, the timing information being required for signaling transfer control and being managed by the second control means; the second control means includes sending means for sending the timing information associating with the time of the clock built in the second control means to the first control means when the second control means receives the inquiry signal; and the first control means calculates the current timing information from the timing information and the time of the clock built in the first control means to perform signaling transfer control.

With respect to claim 6, the prior art of record fails to disclose singly or in combination or render obvious that the first and second control means each includes clock control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information; the second control means manages timing information required for signaling transfer control by the first control means and includes sending means for associating the timing information with the time of the clock built in the second control means and periodically sending the timing information to the first control means; and the first control means calculates the current timing information from the timing information and the time of the clock built in the first control means to perform signaling transfer control.

With respect to claim 7, the prior art of record fails to disclose singly or in combination or render obvious that the first control means performing signaling transfer control and second control means performing user data transfer control relating to the terminal, the first and second control means being provided physically separated from each other; wherein: the first control means includes inquiry means for sending an inquiry signal for inquiring about timing information of the second control means, the timing information being required for signaling transfer control and being managed by the second control means;

Art Unit: 2681

and the second control means includes sending means for sending the timing information to the first control means when the second control means receives the inquiry signal; the first and second control means each includes clock control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information, wherein the first control means includes correction means for compensating the timing information sent from the second control means.

With respect to claim 8, the prior art of record fails to disclose singly or in combination or render obvious that the first control means performing signaling transfer control and second control means performing user data transfer control relating to the terminal, the first and second control means being provided physically separated from each other; wherein: the second control means manages timing information required for signaling transfer control by the first control means and includes sending means for periodically sending the timing information to the first control means; the first and second control means each includes clock control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information, wherein the first control means includes correction means for compensating the timing information sent from the second control means.

With respect to claim 11, the prior art of record fails to disclose singly or in combination or render obvious that the first control means performing signaling transfer control and second control means performing user data transfer control relating to the terminal, the first and second control means being provided physically separated from each other; wherein: the radio base station control system includes a time information sending means for sending time information; the first and second control means each includes clock control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information; the first control means includes inquiry means for sending an inquiry signal for inquiring about timing information of the second control means, the timing information being required for signaling transfer control and being managed by the second control means; the second control means includes sending means for sending the timing information associating with the time of the clock built in the second control means to the first control

Art Unit: 2681

means when the second control means receives the inquiry signal; and the first control means calculates the current timing information from the timing information and the time of the clock built in the first control means to perform signaling transfer control.

With respect to claim 12, the prior art of record fails to disclose singly or in combination or render obvious that first control means performing signaling transfer control and second control means performing user data transfer control relating to the terminal, the first and second control means being provided physically separated from each other; wherein: the radio base station control system includes a time information sending means for sending time information; the first and second control means each includes clock control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information; the second control means manages timing information required for signaling transfer control by the first control means and includes sending means for associating the timing information with the time of the clock built in the second control means and periodically sending the timing information to the first control means; and the first control means calculates the current timing information from the timing information and the time of the clock built in the first control means to perform signaling transfer control.

With respect to claim 13, the prior art of record fails to disclose singly or in combination or render obvious that sending means is provided in the second control means for sending the timing information to the first control means when the second control means receives the inquiry signal; wherein: time information sending means for sending time information is provided; clock control means is provided in each of the first and second control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information, wherein correction means is provided in the first control means for compensating the timing information sent from the second control means.

With respect to claim 14, the prior art of record fails to disclose singly or in combination or render obvious that the second control means manages timing information required for signaling transfer control by the first control means, and sending means is provided in the second control means for periodically sending the timing information to the first control means; wherein: time information sending means for

Art Unit: 2681

sending time information is provided; clock control means is provided in each of the first and second control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information, wherein correction means is provided in the first control means for compensating the timing information sent from the second control means.

With respect to claim 17, the prior art of record fails to disclose singly or in combination or render obvious that first control means performing signaling transfer control and second control means performing user data transfer control relating to the terminal, the first and second control means being provided physically separated from each other; wherein: time information sending means for sending time information is provided; clock control means is provided in each of the first and second control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information; inquiry means is provided in the first control means for sending an inquiry signal for inquiring about timing information of the second control means, the timing information being required for signaling transfer control and being managed by the second control means; sending means is provided in the second control means for sending the timing information associating with the time of the clock built in the second control means to the first control means when the second control means receives the inquiry signal; and the first control means calculates the current timing information from the timing information and the time of the clock built in the first control means to perform signaling transfer control.

With respect to claim 18, the prior art of record fails to disclose singly or in combination or render obvious that first control means performing signaling transfer control and second control means performing user data transfer control relating to the terminal, the first and second control means being provided physically separated from each other; wherein: time information sending means for sending time information is provided; clock control means is provided in each of the first and second control means for synchronizing the time of a clock built in the first control means and the time of a clock built in the second control means by using the time information; the second control means manages timing information required for signaling transfer control by the first control means and includes sending means for associating the timing information with the time of the clock built in the second control means and

Art Unit: 2681

periodically sending the timing information to the first control means; and the first control means calculates the current timing information from the timing information and the time of the clock built in the first control means to perform signaling transfer control.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a) Matsuoka (U.S. 6,885,867 B2), which discloses Mobile communications system base station, and mobile terminal.

b) Hashimoto (U.S. Patent 5,550,992), which discloses Transmission timing control in a base station for cellular TDMA mobile communication by receiving an up-link signal for a different base station.

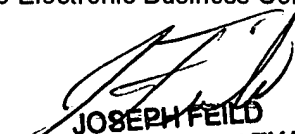
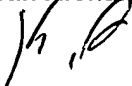
c) Petch (U.S. Patent 6,243,372 B1), which discloses Methods and apparatus for synchronization in a wireless network.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Kamran Afshar whose telephone number is (571) 272-7796. The examiner can be reached on Monday-Friday.

If attempts to reach the examiner by the telephone are unsuccessful, the examiner's supervisor, **Feild, Joseph** can be reached @ (571) 272-4090. The fax number for the organization where this application or proceeding is assigned is **571-273-8300** for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kamran Afshar



JOSEPH FEILD
SUPERVISORY PATENT EXAMINER